

INTERIM REPORT ON
ARCHAEOLOGICAL TEST EXCAVATIONS AT SITE 41 BX 228,
WALKER RANCH, BEXAR COUNTY, TEXAS

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PREFACE

The present manuscript constitutes an interim report on research at 41 BX 228 in 1977. The interim report has been held while awaiting the implementation of mitigation at the site by the Heritage Conservation and Recreation Service (Interagency Archaeological Sciences-Denver). Planning for these large scale investigations began in early 1978 and work began in July 1979. The final report on the 1977 investigations will be incorporated into the publication on the mitigation research.

INTRODUCTION

During June and July 1977, an archaeological crew which included field school students from The University of Texas at San Antonio (under the direction of Dr. Thomas R. Hester) conducted test excavations at site 41 BX 228 on the Walker Ranch. The work was done under the terms of a contract between the Center for Archaeological Research (CAR), The University of Texas at San Antonio and the Soil Conservation Service (Purchase Order #40-7742-7-850). The site lies along the eastern portion of Site 7, a proposed floodwater retarding structure within the Salado Watershed Project proposed by the San Antonio River Authority. Previous archaeological investigations at the site consist of work reported by Scurlock and Hudson (1973), Hudson, Lynn and Scurlock (1974) and Kelly (1974).

Site 41 BX 228 is located on the northeast side of the perimeter of San Antonio, Bexar County, Texas. The Walker Ranch was previously owned by Ganahl Walker, Jr., and his family for many years, but portions were sold to developers and the San Antonio River Authority in the early 1970s. The area is generally bounded by Blanco Road on the west, Bitters Road to the north and northeast and West Avenue on the southeast. Development of the area was minimal until 1978 when housing developments began to encroach on the site from both the east and west.

This area is on the edge of the Balcones Fault which separates the Edwards Plateau to the north and the Coastal Plain to the south. The geology of the region is Upper Cretaceous Edwards and associated limestone with outcrops of the Glen Rose and Gulf series. The San Antonio River and Cibolo Creek are the major drainages in the general area, while Salado Creek and Panther Springs Creek constitute the primary drainages in the specific area of the site. These latter drainages have a concentration of major prehistoric aboriginal occupation sites within a few miles of the Walker Ranch (such as Granburg II and St. Mary's Hall to the south and the Theis site to the west). Paleo-Indian lithic material at both Granburg II and St. Mary's Hall confirms the presence of early occupations in the vicinity.

ENVIRONMENTAL SETTING

Climate

The climate of Bexar County is generally classified as subtropical, with relatively mild winters and hot summers. Detailed statistics concerning the climate of the area can be found in Taylor, Hailey and Richmond (1966), McGraw, Valdez and Cox (1977) and Gerstle, Kelly and Assad (1978).

Fauna

There are numerous species of mammals, reptiles and birds commonly found in Bexar County. A list of animals present (or once present) in the area is presented in Gerstle, Kelly and Assad (1978).

Vegetation

Information on present vegetation was gained by conducting a ground survey of the site. The primary excavation area was covered by a large thicket of impenetrable white brush; the area to be tested was cleared and several transects were cut to allow mapping.

Topography

The Walker Ranch site lies upon the first alluvial terrace of the modern flood plain on the east bank of Panther Springs Creek. The terrain in the immediate vicinity consists of wide alluvial stream terraces bounded on either side by relatively steep, hilly slopes. Previous surveys of the region have identified one historical ruin (41 BX 180) and several aboriginal occupational sites characterized by worked chert, hearths and abundant midden deposits on either side of Panther Springs Creek. The main area of excavation is approximately 503 m southeast of the southern end of a pool of permanent water in the bed of the creek. The northern boundary of the site is at ETM coordinates N2,156,092.95/E630,071.96 and is just above the 1816-foot contour line.

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

A small test pit dug by Hudson and Lynn in 1974 extended to a depth of 20 cm. Twelve Late Prehistoric and Archaic projectile points, bone fragments of a large bovine (probably *Bison bison*), lithic debris and other occupational remains were reported (Hudson, Lynn and Scurlock 1974). In 1974, Kelly and others expanded the original test pit to 1.5-m² and extended the depth to 60 cm. An additional 1.5-m² test unit adjoining the first was laid out to the west and excavated to a depth of 75 cm. Ten Late Prehistoric (*Perdiz* and *Edwards*) and 30 Archaic (primarily *Pedernales*, *Montell*, *Castroville* and *Frio*) projectile points were recovered from these excavations, along with substantial quantities of land snails (*Rabdotus* sp.), lithic tools and debris, burned limestone and bone fragments (Kelly 1974). As a result of these efforts, the site was included as part of the Walker Ranch National Register District, and an extensive program of excavation was recommended prior to dam construction (Hester 1974).

METHODOLOGY

A short briefing of the excavation crew took place before any surface survey or digging was undertaken. It was explained that the primary purpose of the 1977 efforts at 41 BX 228 would be limited to increasing and expanding the data obtained during testing in both 1973 and 1974. Determination of the horizontal extent of the site and its chronological significance were to be considered of particular importance to more fully document the degree of mitigation required prior to dam construction. Initial efforts were to consist of a surface survey of the cleared area (roughly 30 m north-south by 20 m east-west). Non-diagnostic surface finds (chert flakes and small bone fragments) would be collected and bagged by quadrant, while projectile

points and functional tools such as scrapers would be specifically located by azimuth and range from a previously surveyed point using a transit.

The second phase in the investigation was to excavate 1-m² units at selected locations throughout the site. These test pits would be dug in arbitrary 10-cm levels measured from the ground surface of the individual datum points (the southeast corner stake, in each case). Due to time constraints, digging would proceed as rapidly as possible without the taking of a constant volume soil sample (which would be taken later via a column sample from the wall profile) and without mapping in artifacts. A decision to dig at smaller arbitrary levels or by feature would be made on an individual basis upon discovery of significant cultural material. The plotting of individual artifacts might also be accomplished at that time. Special handling was to be accorded bone and charcoal samples. Again, due to the time factor, the matrix from each test pit would be passed through a 1/4-inch mesh screen rather than finer screening material. It was decided, however, to roughly quantify the amount of fire-fractured and burned limestone recovered from each 10-cm level by using a No. 10 bucket* and estimating the quantity excavated.

EXCAVATION

A total of six 1-m² test units was dug in the gently mounded area of what appeared to be the main occupation locus. Terminal depths of these pits ranged from 50 cm (N112/W099) to 110 cm (N100/W099). All except the shallowest terminated in a deep deposit of large river gravels in a virtually sterile matrix. Test pit N112/W099, the shallowest, was closed at 50 cm depth due to the intrusion of an extremely large oak root and numerous smaller roots. To define the extent of the occupation area within the time constraints, two general north-south and east-west transects approximately 2 m wide were extended from the primary excavation area. Eight shovel tests, 50 cm², were dug along these lines at 25-m intervals. Four of these shovel tests extended southward along the margins of the creek terrace, and four shovel tests extended eastward away from the creek. Each shovel test was excavated in arbitrary 25-cm levels until large reddish river gravels were reached, at which point digging ceased.

LITHIC ARTIFACTS

Surface Finds

Careful surface survey of the cleared area on hands and knees revealed 32 chipped stone artifacts among the thousands of chert flakes collected. Among the scrapers and larger bifaces were 15 projectile points. These included *Ensor* (5), *Nolan* (4), *Pedernales* (2), *Montell* (1), *Frio* (1), *Castroville* (1) and *Kinney* (1). These projectile points represent an extremely wide temporal span, perhaps as much as 5500 years. The contiguous surface distribution of these projectile points is

* One No. 10 bucket is the equivalent of 3 gallons or 69.5 cubic inches.

indicative of a great deal of disturbance, probably due in large part to rodent burrowing. It should be noted that six armadillo (*Dasypus novemcinctus*) burrows were identified and plotted along the terrace in the southwest quadrant of the main excavation area. In point of fact, six of the projectile points found on the surface were discovered directly upon the tailings of these burrows.

Chert Flakes

Flakes can be defined as the lithic debris resulting from the knapping (chipping) of lithic material during the production of tools (Hudson, Lynn and Scurlock 1974:32). The flakes recovered from excavations at the Walker Ranch have been divided into seven categories. These categories and their definition were used in sorting and are presented below:

Primary Flakes

These are flakes with cortex covering the dorsal surface.

Secondary Flakes

These flakes have cortex on the dorsal surface, and at least one flake scar is also present.

Interior Flakes

These flakes lack cortex on the dorsal surface, although some may be retained on the striking platform.

Lipped Flakes

Usually the result of soft hammer percussion, lipped flakes produce characteristically thin and arched flakes. The flakes usually have a lenticular-shaped striking platform with the diagnostic lip or ridge located on the ventral side of the flake (Wesolowsky, Brown and Hester 1976:60). Lipped flakes have also been referred to as "billet flakes" (Epstein 1961:71, 1963:29; Shafer 1971:12).

Flake Blades

These flakes follow two general rules: (1) they are twice as long as wide; and (2) they have one (or more) medial ridge on the dorsal surface. A more detailed definition of blades and their production is presented in Hester and Shafer (1975:175-176).

Flake Fragments

Fragments with no platform or bulb of percussion, these flake fragments normally constitute the largest group in any flake assemblage recovered from an excavation.

Utilized/trimmed Flakes

Both utilized and trimmed flakes have been grouped into one category as they represent a very small percentage of the total flake count. The two types

of "retouched" flakes in this category may be defined as follows: (1) utilized flakes are those which exhibit some edge chipping and/or polishing (Fox *et al.* 1974:31); and (2) trimmed flakes are those which have had some very small flakes removed along one or more edges (a nibbling effect).

There are 20,812 flakes recovered from the excavations and shovel tests. As Table 1 demonstrates, the greatest number of flakes are, not unexpectedly, in the flake fragment category (57%). Primary, secondary and interior flakes combined represent another 36% of the total debitage. Interestingly, the 1,034 lipped flakes constitute a significant 5%. Blades (2%) and utilized/trimmed flakes (less than 0.3%) represent the smallest categories. Table 1 provides a delineation of each of the flake categories, with a breakdown of the number of flakes per level. The large number of flakes excavated in the primary, secondary, interior, lipped and flake fragment categories indicates that the site was used for biface reduction and tool manufacture as well as for other non-lithic activities over an extended period of time. These five categories represent 98% of the total lithic refuse.

Burned Limestone

As the site is approached from the creek bed (or from the west), the first indication of aboriginal occupation noticeable upon the ca. 15 foot terrace is fire-fractured limestone eroding out of the terrace face. During excavation, burned limestone fragments were encountered in each test pit from just under the surface of the ground to the depth where the large river gravels and a virtually sterile matrix begin. Generally speaking, the amount of burned fragments peaked in all test pits between 50 and 70 cm depth. This peak ranged from 1.3 No. 10 buckets of fragments to a high of 5.25 No. 10 buckets in Unit N117/W105. A secondary peak between 30 and 40 cm depth was noted in three of the six excavation units, specifically those three units closest to the creek terrace. The fire-fractured limestone fragments displayed the typical angular fractures associated with thermal alteration, and ranged in size from that of a golfball to a softball. Most fragments were closely clustered around the size of a tennis ball or slightly larger. Inexplicably, very little charcoal was found among the limestone fragments. In fact, most cultural material was discovered just above or below the concentrated layers of burned limestone, not among the fragments.

Projectile Points and Preforms

A total of 68 lithic preforms and projectile points were recovered from testing at 41 BX 228, along with numerous worked scrapers and large thin bifacial tools. Projectile point preforms and unidentified points accounted for 22% of this total and were equally distributed throughout the 10 to 60 cm levels. By far the largest quantity (32%) of the identifiable points were of the *Pedernales* variety, with several bases which had been carefully modified into perforators included in this category. Half of these *Pedernales* points (11) were excavated from the 40 to 50 cm levels, with the remainder occurring as deep as the 60-to-70 cm level (one point) and as close to the surface as the 10-to-20 cm level (three points). The next largest category of projectile points (10%) was found

TABLE 1. AVERAGE NUMBER OF CHERT FLAKES BY ARBITRARY EXCAVATION LEVEL AND TYPE FROM THE WALKER RANCH SITE, BEXAR COUNTY, TEXAS*

LEVEL	PRIMARY FLAKES	SECONDARY FLAKES	INTERIOR FLAKES	LIPPED FLAKES	FRAG- MENTS	BLADES	UTILIZED/ TRIMMED	TOTAL
Surf-10 cm	5.5 1.3	36.8 14.5	56.8 48.0	14.5 8.8	216.3 171.3	2.7 2.0	0.3 1.5	332.9 247.4
10-20 cm	7.5 2.3	51.0 13.3	129.2 41.0	20.3 5.3	284.8 44.8	7.2 1.7	1.5 0.7	501.5 159.1
20-30 cm	7.8 0.5	52.0 1.8	144.5 7.0	27.8 1.8	389.5 15.3	8.0 0.5	2.7 0.2	632.3 27.1
30-40 cm	6.8	84.0	197.8	21.2	400.0	8.8	1.8	720.4
40-50 cm	6.2	53.2	141.8	35.6	365.6	13.4	1.4	617.2
50-60 cm	2.6	46.0	144.2	11.2	262.0	13.4	0.6	480.0
60-70 cm	3.4	34.2	97.4	16.2	163.2	5.4	0.4	320.2
70-80 cm	12.0	62.5	106.5	42.0	347.0	5.5	1.0	576.5
80-90 cm	8.5	13.0	24.0	6.5	35.5	1.1	---	88.6
90-100 cm	2.0	14.0	19.0	5.0	32.0	2.0	1.0	75.0
100-110 cm	---	---	---	2.0	3.0	---	---	5.0
	62.3 4.1	446.7 29.6	1061.2 96.0	202.3 15.9	2498.9 281.4	67.5 4.2	10.7 2.4	4349.6 433.6

* Dual entries for the first three levels represent the 1-m² excavations on top and the 50-cm² shovel tests on the bottom.

to be the *Edwards/Scallorn* variety. These points were found between the surface and 30 cm, indicative of their relatively recent origin. Additional point types (over 35%), numbering four or fewer specimens in each case, included a distinctive leaf-shaped style which may represent a preform, *Montell*, *Marshall*, *Frio*, *Enson*, *Castroville*, *Lange*, *Bulverde* and *Nolan*. Despite the overt indication of disturbance mentioned earlier, it is interesting to note that depth of recovery closely follows the generally accepted chronology of the types represented (Summ, Krieger and Jelks 1954; Weir 1976). The deepest recorded artifact, a "left-handed" *Nolan* point found at 88 cm in Unit N108/W104, is of very early Archaic or Pre-Archaic manufacture, while the *Scallorn* and *Edwards* varieties which appear near the surface are of the Late Prehistoric period.

Guadalupe Tool

A distinctive tool form generally referred to by the rubric "Guadalupe gouge" was recovered at a depth of 79.5 cm from the southwest quadrant of the northern half of test pit N107/W104. The basic form of the *Guadalupe* tool is long and narrow with nearly equal width and thickness. The ventral surface has steep sides rising to a ventral ridge which gives the tool a keeled appearance. The distal end is characterized by a steeply beveled bit or scraping edge, creating the unique "shovel-nosed" feature of the classic *Guadalupe* tool. An analysis by Jaquier (ms.) of 12 *Guadalupe* tools from the nearby Granburg II site indicates that the artifact recovered at 41 BX 228 on the Walker Ranch is somewhat shorter than the norm, yet it has all the features of the classic tool. A macromorphological examination of the dorsal surface of the bit of the tool discloses abnormally heavy step flaking; however, the ventral surface (the flat "shovel-nose") displays neither wear nor retouch.

The tool was found in association with a tightly-knit concentration of burned, fractured limestone lying between 68 and 80 cm in depth which the excavators feel represented a hearth. Both the *Guadalupe* tool and the bottom of the hearth rested slightly above the reddish river gravels which began at 85 cm. It should be noted that material recovered from the adjacent test pit to the north, Unit N108/W104, includes a definite cultural layer in the southwest quadrant which contained a *Nolan* projectile point, several fragments of probable deer bone, a lump of yellow ochre, and numerous chert flakes between 86 and 90 cm. Since a broken *Pedernales* base was found in the south wall above the hearth at a depth of 67 cm, a rough temporal span can be postulated. Previous efforts at temporal placement of the tool extend from at least the Early Archaic, based upon clearly stratified context at Granburg II a few miles south, back into the Paleo-Indian period as exemplified at Baker Cave (Hester, personal communication) and the Johnston-Heller site. Geographical placement of the *Guadalupe* tool is depicted (Hester and Kohnitz 1975) as a relatively widespread distribution along the San Antonio and Guadalupe River drainages of south central Texas.

Other Tools

Other tool forms, principally unifaces, are under analysis and will be described at a later date.

Backfill Surface Finds

A local relic collector had recently vandalized a large portion of the northwest quadrant of the main excavation area. This digging apparently began in the area of the 1974 test pits and proceeded in a generally southwest direction. It is obvious that this collector is basically a scavenger intent only on recovering the greatest number of "arrowheads" in the shortest possible time with the least effort. The digging was done with a pick to a depth of approximately 18 inches without screening. Backfill was pushed to the rear as digging progressed, and many artifacts were found on the surface of this backfill. These finds, including large fragments of probable bison bone, the mandible of a deer with teeth in place, and several bifacial lithic tools (among them, two perfect perforators), were separately bagged and catalogued.

ANIMAL AND PLANT REMAINS

Bone Recovery

Bone preservation from all units was generally excellent, and a large quantity of faunal remains were sent to Billy Davidson of the Laboratory of Vertebrate Paleontology, The University of Texas at Austin, for identification. The results of this analysis are presented in Table 2. Although no decorated bone was recovered during the limited testing, two functional tools were identified.

The first tool is an antler fragment split longitudinally in half and cut on the large end with seven clean facets where it would join the skull plate. It was found in the 10 to 20 cm level of Unit N117/W105 in association with scrapers, a *Scallorn* point and two *Pedernales* preforms. The thickness of this worked antler ranges from 23.5 mm diameter on the faceted end to 22.5 cm diameter on the fractured end. The overall length of the tool measures 6.3 cm. This fragment may represent half of a tool handle or billet used for percussion flaking of lithic tools which split during use, or it may have been intentionally split for an unexplained purpose. The antler fragment is lightly polished; however, macroscopic examination of the surface and the facet cuts is inconclusive.

The second faunal artifact is a spur of bone which has been carefully cut and abraded to its present shape and then smoothed through use and/or deliberate polishing. It was found in the 40 to 50 cm level of test pit N108/W104 along with several projectile points of the *Pedernales* variety. The length of this tool is 2.9 cm, while the thickness ranges from 3 mm on the hooked end to 9 mm on the other end. The hook displays heavy wear on the terminal end and angles upward from the longitudinal axis at roughly 60°. This artifact is most likely an atlatl (spearthrower) spur.

Seeds and Nutshells

The recovery of spiny hackberry seeds and acorn/black walnut hulls was minimal, due both to the relatively large size of the screening (1/4-inch mesh) through which the matrix was passed and the open exposure of the campsite. A significant concentration of hackberry seeds was uncovered in the northwest quadrant of Unit

N117/W105 at a depth of 27 cm. This seed concentration occurred in the same level which produced an *Edwards* and a *Frio* projectile point, a polished antler tip, a greater than normal quantity of burned limestone rock, several bifacial tool fragments and a large amount of land snail shells. A suggested research goal for future investigators should be to fine-screen (1/8-inch mesh or less) predetermined quantities of the matrix from each unit to recover the smaller plant remains in order to provide a more accurate prehistoric dietary pattern.

Gastropods

Five species of snails recovered from the Walker Ranch excavations were identified and analyzed by Wayne Cox. These included *Rabdotus* (formerly *Bulimulus*) sp., *Helicina orbiculata tropica*, *Polygyra texasiana*, *Euglandia texasiana* and *Helisoma trivolvis*. Of the total 16,859 land snails recovered, *Rabdotus* was the overwhelmingly predominant species (74%). *Helicina* was the next most dominant species (25%). It should be noted that only 1/4-inch mesh screen was used during this testing phase, and neither fine screening nor flotation was attempted. Therefore, many of the smaller species were undoubtedly lost. Since our primary concern with the presence of snails is based upon the assumption that they constitute a dietary supplement, it logically follows that the most expedient utilization would be concerned with the larger species. The dominance of the *Rabdotus* species is considered significant in this respect. The only larger species, *Euglandia*, comprised only 0.02% of the collection, which could represent either a food avoidance or non-availability factor. The latter explanation for the paucity of *Euglandia* is preferred based upon the scarcity of this food resource under present climatic conditions and the lack of *Euglandia* remains at other local excavations. Although the "camp scavenger" theory cannot be ignored as an explanation for the presence of land snail shells, the overwhelming preponderance of *Rabdotus* must be considered as a positive indicator of an occupational food supplement. Analysis of the two largest categories, *Rabdotus* and *Helicina*, appears to indicate that the majority of the *Rabdotus* were mature animals, while the *Helicina* were not. This would seem to indicate pre-selection of the adult and might prove fertile ground for further investigation.

The heaviest concentration of *Rabdotus* occurs in the 50 to 60 cm level of all excavation units with the exception of N100/W099. This unit, however, is at a higher elevation than the other squares, and when this fact is taken into consideration, the land snail concentration adjusts to conform to the 50 to 60 cm depth noted in the other units. It appears that adult *Rabdotus*, and possibly *Helicina*, may represent an aboriginal dietary supplement most heavily consumed by the culture associated with artifacts from the 50 to 60 cm level, and possibly, the levels directly above. Lending credence to this theory of an intentionally gathered subsistence item is the excavation of several concentrations of *Rabdotus*, particularly in Units N107/W104 and N108/W104 (the central portion of the site).

Mussel Shell

Fragments of freshwater mussel shell were found in all six excavation units. The greatest concentration of mussel shell fragments lies between 10 to 30 cm depth. In many instances, only a portion of the thicker valve area remained intact. No effort has been made to identify the particular species of freshwater mussel due to the insignificant amount of shell recovered. It does not appear that the freshwater mussel constituted an important dietary supplement for the prehistoric peoples at 41 BX 228, nor was it used for decorative purposes.

Palynology

Phil Dering of the Anthropological Research Laboratories of Texas A&M University collected eight soil samples from test pit N108/W104 at 10 cm intervals from the surface to the 80 cm level. This unit was chosen for sampling due to its central location, the richness of cultural material retrieved from the unit and the excellent preservation of the bone fragments recovered. It was hoped that sufficient fossil pollen could be identified to justify more extensive pollen analyses at a later date. Dering processed the soil samples using the following procedure:

1. The samples were screened through a 250-micron mesh screen to remove the larger particles.
2. Trisodium phosphate (Na_3PO_4) was added to break up the aggregated soil particles.
3. Each sample was screened through a 15-micron Nitex nylon screen to separate the clay from the pollen and other larger particles.
4. Ten percent hydrochloric acid (HCl) was added to each sample to remove carbonates.
5. Silicates were removed using the zinc chloride-heavy density separation method.

Unfortunately, none of the samples was found to contain sufficient amounts of pollen for statistically sound interpretation. The presence of fungal spores in most of the samples suggests that biological attack and degradation is one probable cause of pollen destruction. Dering states:

The high pH of the soil often provides an environment which accelerates oxidation of the pollen wall. The soils of Walker Ranch are calcareous and very alkaline, thus providing ideal surroundings for pollen destruction. Although I cannot pinpoint the cause, these two factors probably are responsible for degrading the pollen at 41BX228 on the Walker Ranch.

South Texas soils, particularly open campsites such as 41 BX 228, have historically not been amenable to pollen preservation. Dering concludes his analysis

by recommending that further attempts at pollen recovery at this Walker Ranch site not be conducted since additional testing would also prove non-productive, considering the current state of the art.

EXCAVATION PROFILES

Profiles of the south and east walls of each excavation unit were drawn at the conclusion of the testing. Concentrations of fire-fractured limestone are found in Unit N117/W105 between 20 and 35 cm depth and between 55 and 70 cm depth. The lower stratum of burned limestone lies within a transitional soil just above a dramatic color change (from dark grayish brown to a strong reddish brown) and soil variation (from occasional intrusions of small white gravel to a large river gravel so dense that there is only minimal soil associated). The profiles of this unit correspond very closely with the profiles from the other test pits. A Munsell color chart was used to record variations in soil color in each test pit; these soil colors corresponded directly by level, regardless of excavation unit.

RADIOCARBON DATING

Four charcoal samples excavated at 41 BX 228 were submitted to The University of Texas at Austin Radiocarbon Laboratory. The results of the analyses conducted are provided below (E. Mott Davis and Sam Valastro, personal communication).

TX-2810: A-2 of N100/W99; Southeast Quadrant

This sample of charcoal was found in association with *Edwards*, *Frio* and *Montell* points. A radiocarbon assay of 480 ± 140 B.P. was obtained (ca. A.D. 1420). This date is somewhat later than had been expected for the Late Archaic-Late Prehistoric associated artifacts. However, some mixing of several levels may have occurred (naturally) due to considerable root intrusion at the site; thus the date should undoubtedly be ignored.

TX-2811: A-3 of N100/W99; Southeast Quadrant

Although no artifacts were found in association with this sample of charcoal, it is indicative of the Late Archaic to early Late Prehistoric time frame as represented by other levels (of the same depth) at the site. The radiocarbon assay for this sample is 940 ± 180 B.P. (ca. A.D. 1050). This date falls in the range anticipated for the time frame presented above.

TX-2812: C-3 of N108/W104; Excavation Unit

A *Frio* point (Late Archaic) was found in association with this sample of charcoal. Chronometric analysis yielded a date of 1110 ± 110 years B.P. (ca. A.D. 910). This date falls well within the expected Late Archaic period as indicated by the *Frio* point.

TX-2813: C-4 of N108/W104; Excavation Unit

The charcoal sample from this unit proved to be too small to date. However, it was associated with a *Castroville* point and was anticipated to date in the latter part of the Middle Archaic.

Discussion

Sample TX-2810 dated later than had been anticipated, probably due to the great amount of root intrusion at this unit and level. This sample dates later in terms of associated artifacts; however, when one considers the depth of the unit (10-20 cm), its date of ca. A.D. 1420 is not at all out of range. It is believed that root intrusion is responsible for mixing of levels. Charcoal samples from TX-2811 and TX-2812 both fall within the anticipated time frames. The two samples came from the 20 to 30 cm level. TX-2811 and TX-2812 date ca. A.D. 1050 and ca. A.D. 910 respectively, and although they do fall within the expected time frame, they tend to date at the latter end of that period. This seems to correspond well with other radiocarbon dates of the area such as those from sites on Camp Bullis (Gerstle, Kelly and Assad 1978), John James Park in northern Bexar County (Cantu *et al.* 1977) and the La Jita site in Uvalde County (Hester 1971).

Additional work at site 41 BX 228 should pay particular attention to the recovery of charcoal samples for more accurate testing of the chronological sequence in this area.

SUMMARY

The Walker Ranch site (41 BX 228) presents a rare view of prehistoric man in Bexar County over a long time span. There is much knowledge to be gained from precise, problem-oriented excavation of this unusual and challenging open occupation site prior to its destruction in the course of building a floodwater retarding structure. A greater understanding of the full spectrum of the Archaic cultural assemblage will accrue with broad horizontal exposure of the primary campsite. Future excavation will provide important information on the seasonality and duration of settlement, subsistence patterns, and the technology of the prehistoric societies which once inhabited this site and the region.

The original Soil Conservation Service purchase order called for the submission of recommendations and mitigation plans. However, intensified vandalism at the site in late 1977 and early 1978 led the Center for Archaeological Research to urge the implementation of full scale (mitigation-level) excavations at the site. These investigations were funded and initiated as part of the Heritage Conservation and Recreation Service (Interagency Archeological Services-Denver) Salado Creek Watershed study Contract No. C3561(78) in July 1979 and will conclude in November 1979.

REFERENCES CITED

Cantu, E., A. Frkuska, F. Valdez, Jr. and T. R. Hester

- 1977 An Initial Archaeological Assessment of John James Park, City of San Antonio, Texas. *Center for Archaeological Research, The University of Texas at San Antonio, Archaeological Survey Report 38.*

Epstein, J. F.

- 1961 The San Isidro Site: An Early Man Campsite in Nuevo Leon, Mexico. *Anthropology Series 7, Department of Anthropology, The University of Texas at Austin.*
- 1963 Centipede and Damp Caves; Excavations in Val Verde County, Texas, 1958. *Bulletin of the Texas Archeological Society 32 (for 1962): 1-29.*

Fox, D. E., R. J. Mallouf, N. O'Malley and W. M. Sorrow

- 1974 Archaeological Resources of the Proposed Cuero I Reservoir, Dewitt and Gonzales Counties, Texas. *Texas Historical Commission and Texas Water Development Board, Archaeological Survey Report 12.*

Gerstle, A., T. C. Kelly and C. Assad

- 1978 The Fort Sam Houston Project: An Archaeological and Historical Assessment. *Center for Archaeological Research, The University of Texas at San Antonio, Archaeological Survey Report 40.*

Hester, T. R.

- 1971 Archaeological Investigations at the La Jita Site, Uvalde County, Texas. *Bulletin of the Texas Archeological Society 42:41-148.*

Hester, T. R. (editor)

- 1974 Archaeological Survey of Areas Proposed for Modification in the Salado Creek Watershed, Bexar County, Texas. *Center for Archaeological Research, The University of Texas at San Antonio, Archaeological Survey Report 3.*

Hester, T. R. and H. Kohnitz

- 1975 The Chronological Placement of "Guadalupe" Tools. *La Tierra 2 (2):22-25.*

Hester, T. R. and H. J. Shafer

- 1975 An Initial Study of Blade Technology on the Central and Southern Texas Coast. *Plains Anthropologist* 20 (69):175-185.

Hudson, W. R., Jr., W. M. Lynn and D. Scurlock

- 1974 Walker Ranch, An Archaeological Reconnaissance and Excavations in Northern Bexar County, Texas. *Texas Historical Commission, Office of the State Archeologist, Report 26.*

Jaquier, J. A.

- ms. An Analysis of Lithic Tools from the Johnston-Heller Site, Texas Coastal Plain. In preparation.

Kelly, T. C.

- 1974 Notes on Test Excavations at Site 41 BX 228 (Panther Springs Site). Appendix II, in: Archaeological Survey of Areas Proposed for Modification in the Salado Creek Watershed, Bexar County, Texas. *Center for Archaeological Research, The University of Texas at San Antonio, Archaeological Survey Report 3.*

McGraw, A. J., F. Valdez, Jr. and I. W. Cox

- 1977 Archaeological Survey of Areas Proposed for Modification in the Encino Park Development, Northern Bexar County, Texas. *Center for Archaeological Research, The University of Texas at San Antonio, Archaeological Survey Report 39.*

Scurlock, D. and W. R. Hudson, Jr.

- 1973 An Archeological Investigation of the Walker Ranch. *Texas Historical Commission, Office of the State Archeologist, Special Report 9.*

Shafer, H. J.

- 1971 Investigations into South Plains Prehistory, West Central Texas. *Salvage Archaeology in the Robert E. Lee Reservoir District. Papers of the Texas Archaeological Salvage Project 20.*

Suhm, D. A., A. D. Krieger and E. B. Jelks

- 1954 An Introductory Handbook of Texas Archeology. *Bulletin of the Texas Archeological Society 24.*

Taylor, F. B., R. B. Hailey and B. L. Richmond

- 1966 Soil Survey of Bexar County, Texas. *U. S. Department of Agriculture Soil Conservation Service, Series 1962:12.*

Weir, F. A.

- 1976 The Central Texas Archaic. Unpublished Ph.D. dissertation,
Washington State University, Pullman.

Wesolowsky, A. B., D. R. Brown and T. R. Hester

- 1976 Archaeological Investigations at the Jetta Court Site (41TV151),
Travis County, Texas. *Bulletin of the Texas Archeological
Society* 47:25-87.